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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,606	12/11/2003	James R. Hochstein JR.	EH-10969 (03-439)	8514
34704 7590 05/04/2007 BACHMAN & LAPOINTE, P.C. 900 CHAPEL STREET SUITE 1201 NEW HAVEN, CT 06510			EXAMINER HECKERT, JASON MARK	
			ART UNIT 1746	PAPER NUMBER
			MAIL DATE 05/04/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/733,606		HOCHSTEIN ET AL.	
	Examiner		Art Unit	
	Jason Heckert		1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 7-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 16-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/24/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of invention I, claims 1-6, in the reply filed on 2/17/07 is acknowledged. The traversal is on the ground(s) that the search is expected to overlap and that the common technical feature of the "extensible head" unifies the group. This is not found persuasive because invention I does not require the particulars of the subcombination invention II. Specifically, invention I does not require a cooling fluid flowpath. Invention III can be practiced by different apparatus than invention I, as stated previously, such as one without an elongated conduit having an upstream first end and a downstream second end; and the apparatus as claimed can be used to practice another process such as one without the step of introducing fuel and an oxidizer to a conduit and initiating a reaction of the fuel and oxidizer to produce a shockwave. Finally, invention II and be used in an entirely different method than invention III, since it has the capability to view anything, including things other than industrial equipment.

The requirement is still deemed proper and is therefore made FINAL.

Response to Arguments

1. Applicant's arguments, see pages 9 and 10, filed 2/21/07, with respect to the rejection(s) of claim(s) 1-2 under 35 U.S.C §112 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.
2. Applicant's arguments, see pages 9 and 10, filed 2/21/07, with respect to the rejection(s) of claim(s) 1-3, 5-6 under obviousness-type double patenting have been

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fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior.

3. Applicant's arguments, see pages 9 and 10, filed 2/21/07, with respect to the rejection(s) of claim(s) 1-2 under 35 U.S.C §102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

4. Applicant's arguments, see pages 9 and 10, filed 2/21/07, with respect to the rejection(s) of claim(s) 1-6 under 35 U.S.C §103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior.

5. The applicant has amended the claims to include the limitation of an extensible and retractable head. Neither Aarnio et al., Hunter, Zilka et al, Hong et al., JP' 620, nor copending Application No. 10/801, 215 teach the use of an extensible head. However, this type of head is known in the art, as discussed below.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 and 11 of copending Application No. 10/801,215 in view of Ashton, III et al. (Ashton). Ashton teaches an extensible head 110 that carries an inspection device upwards in the interior of a vessel (col. 6 lines 26-39). Ashton also teaches that other types of extensible heads are known in the art (col. 5 lines 47-54). It would have been obvious at the time of the invention to modify copending application 10/801,215 and include an extensible head, as taught by Ashton, and obtain the claimed apparatus and enhance cleaning.

This is a provisional obviousness-type double patenting rejection.

8. Claims 1-3 and 5-6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 8 of U.S. Patent No. 7,011,047 (Aarnio et al.) in view of JP 59-219620 (JP'620) and further in view of Ashton. Aarnio et al. disclose an apparatus for cleaning a surface within a vessel as claimed. The difference between the claimed apparatus and the apparatus as claimed in Aarnio et al. is that Aarnio et al. does not claim the inspection camera apparatus. JP'620 discloses the inspection camera apparatus as claimed, but does not disclose an extensible head. See the abstract. Ashton, as discussed supra, discloses the extensible head for an inspection device in an industrial apparatus. It would have been

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obvious at the time of the invention to modify Aarnio et al, and include an inspection camera, as taught by JP'620, on an extensible head, as taught by Ashton, to obtain the claimed apparatus and enhance surface cleaning.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 1-3, 5-6, and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter or Zilka et al. (Zilka) in combination with JP'620 and further in view of Ashton. Hunter discloses an apparatus for cleaning the interior walls of a heat producing system. The reference discloses a source of fuel and oxidizer, the initiator and producing the shockwave as claimed. The reference discloses all limitations with the exception of the inspection camera as claimed. See col. 1 lines 8-10, 30-33, 51-59, and col. 4 lines 27-67.

11. Zilka discloses a device and method for online explosives-based cleaning and deslagging of a fuel burning facility such as a boiler. See the abstract. The reference discloses producing the shockwave as claimed. See paragraphs, 3, 4, 21, 42, and 54. Zilka, like Hunter, does not disclose an inspection camera. JP'620, as discussed supra, discloses the inspection camera. Ashton, as discussed supra, teaches the use of an extensible head for an inspection device. Ashton also discloses a flexible body, or core (col. 5 lines 64 – 67 col. 6 lines 10 – 15). It would have been obvious at the time of the

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invention to modify Hunter or Zilka and include the inspection camera of JP'620 with the extensible head on a flexible body, as taught by Ashton, to improve surface cleaning and allow for the camera to reach a variety of locations.

12. Claims 4 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter or Zilka in combination with JP'620 in view of Ashton and further in view of Dippold (DE 19641887). Neither Hunter, Zilka, JP'620, nor Ashton disclose a water cooled camera. Dippold discloses a water cooled camera 5, that is movable, rotatable about an axis of the head, and includes a light source that is oriented in a direction transverse to an axis of the head and the support 3 (see abstract). It would have been obvious at the time of the invention to modify Zilka or Hunter with a camera as taught by JP'620 with the extensible head of Ashton, and further include the features disclosed by Dippold, such as a water cooled rotating camera with a light source, to further aid in surface cleaning.

13. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter or Zilka in combination with JP'620 in view of Ashton in view of Ashton et al. (U.S. Patent 5,564,371) and further in view of Woudenberg et al. According to the applicant's specification, the camera may be a CCD-type camera (paragraph 0029). Ashton discloses the use of a CCD-type camera in U. S. Patent 5,564,371 another cleaning and inspection apparatus. Hence it is known to use CCD type cameras in inspection apparatuses. However, Ashton does not disclose the use of light filters. Woudenberg discloses that measuring light of different wavelengths with light filters and CCD cameras is known in the art (paragraph 0173). It would have been obvious at the

time of the invention to modify Hunter or Zilka and include the inspection camera of JP'620 with the extensible head on a flexible body, as taught by Ashton, to improve surface cleaning and allow for the camera to reach a variety of locations. It would have also been obvious to include a CCD camera, as previously taught by Ashton for use in industrial cleaning, with light filters as taught by Woundenberg, because that combination is well known for the detection of specific wavelengths of light.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Heckert whose telephone number is (571) 272-2702. The examiner can normally be reached on Mon. to Friday, 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMH



MICHAEL BARR
SUPERVISORY PATENT EXAMINER